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ABSTRACT

This report represents the second in a series intended to summarize the empirical research findings and major theoretical approaches relating to the issues of drug use and abuse. This volume reviews some of the major research findings which explore the relationship between nonmedical drug use and sexual behavior. The research is summarized and classified according to the type of drug use studied: multi-drug, marijuana, amphetamines, LSD, heroin and methadone. The summaries are formulated and detailed to provide the reader with the purpose, methodology, findings and conclusions of each study reviewed. (Author/SJL)

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Research Issues 2

DRUGS AND SEX

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10. Drug Themes in Fiction

Cover Illustration

William Blake. The figure of Urizen or the Ancient of Days.
Frontispiece from *Europe*. Illuminated printing.

DRUGS AND SEX

The Nonmedical Use of Drugs
and Sexual Behavior

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FOREWORD

The issues of drug use and abuse have generated many volumes of words, all written in an attempt to explain the "problem" and suggest the "solution." Data have been generated by researchers from many disciplines, each looking at a particular aspect of an issue. The present booklet is one of a new series intended to aid researchers who find it difficult to find the time to scan, let alone read all the information which exists and which continues to be published daily in their area of interest. An attempt has been made to focus predominantly on empirical research findings and major theoretical approaches.

Included in volumes 1 through 7 of the series are summaries of the major research findings of the last 15 years, formulated and detailed to provide the reader with the purpose, methodology, findings and conclusions of previous studies done in the topic area. Each topic was chosen because it represented a challenging issue of current interest to the research community. As additional issues are identified, the relevant research will be published as part of this series.

Several of the volumes in the series represent a departure from the above description. These also represent challenging issues, and issues of current interest; they are, however, virtually unexplored areas which have received little attention from the research world. For example, the subjects of drugs and the visual arts, science fiction, and fiction--aspects of contemporary life which impact on all of us--are explored here by writers who have been deeply involved in those fields. Their content is perhaps provocative, and certainly stimulating.

The Research Issues series is a group project of staff members of the National Institute on Drug Abuse, Division of Research, Behavioral and Social Sciences Branch. Special thanks are due to the continued guidance and support of Dr. Louise Richards and Dr. Norman Krasnegor. Selection of articles for inclusion was greatly aided by the suggestions of a peer review group, researchers themselves, each of whom reviewed a topic of particular interest. It is my pleasure to acknowledge their contribution to the project here.

Dan J. Lettieri, Ph. D.
Project Officer
National Institute on Drug Abuse

ACKNOWLEDGMENTS

A bibliographic project such as this necessarily involved a great number of people, all of whom contributed their own particular talent. Many worked on more than one phase of the project. Many more are not named here--their help and advice was instrumental in shaping and defining the series and the individual topics. It is important, however, to distinguish between the members of the peer review group who were instrumental in the initial selection of the articles to be included and abstracted, and the members of the abstracting team who bear sole responsibility for the final format and content of the abstract of each research paper included in this volume.

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PREFACE

An extensive and comprehensive literature search was carried out to identify materials for inclusion in the Research Issues series. Major clearinghouses, data bases, library collections, and previous bibliographies were searched, either through an automated system or manually. Special efforts were made to correspond with organizations, institutions and individuals who might have relevant materials. Current issues of newsletters and journals were scanned throughout the project. A selective list of the sources accessed includes:

National Clearinghouse for Drug Abuse Information (NCDAI)

NCDAI: Report Series, Selected Reference Series

Drug Abuse Current Awareness System (DACAS)

SPEED: The Current Index to Drug Abuse Literature

Grassroots

Addiction Research Foundation, Bibliographies

Drug Dependence

Psychological Abstracts (PASAR)

Sociological Abstracts

Dissertation Abstracts

Index Medicus (MEDLINE)

Addiction: Bioresearch Today

Research in Education (ERIC: RIE)

Public Affairs Information Service (PAIS)

Monthly Catalog of U.S. Government Documents

Music Index

Art Index

Guide to the Performing Arts

Reader's Guide to Periodical Literature

The criteria for selection of documents were drawn up by a consultant group of drug researchers working with the contractor and representatives of the National Institute on Drug Abuse. For inclusion a study had to meet the following general criteria:

(1) empirical research studies with findings pertinent to the particular topic, or major theoretical approaches to the study of that topic

(2) published between January 1958 and January 1974, preferably in the professional literature, with the exception of certain older "classics" which merited inclusion and unpublished dissertations

(3) English language; however, since the focus was on American drug issues, those English language materials which dealt with aspects of drug use encountered largely in other countries were excluded.

After a first review of citations and annotations, to weed out obviously irrelevant materials, the body of collected literature was subjected to two reviews: one to ensure that materials met the selection criteria, and a second by a peer review group to ensure that studies representative of the universe were included.

TABLE OF CONTENTS

		Page
I.	MULTI-DRUG	1
II.	MARIJUANA	18
III.	AMPHETAMINES	35
IV.	LSD	43
V.	HEROIN AND METHADONE	46

I. MULTI-DRUG

Freedman, Alfred M. Drugs and sexual behavior. Medical Aspects of Human Sexuality, 1(3):25-31, November 1967.

DRUG	Multi-Drug
SAMPLE SIZE	5
SAMPLE TYPE	Not Specified
AGE	Not Specified
SEX	3 Male, 2 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Not Specified
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	9

SUMMARY

This article theorizes that the variety of drug responses in a population may be due in large part to the situation in which the drug is used. The author postulates that this may be the most powerful factor in producing manifest clinical response. In terms of sexual effects, the effect of a specific drug may depend on the expectation of the individual. Needs, desires, expectations and knowledge all interact with the specific effect of the drug.

The point is illustrated with observations of five different drug users in their 20's, 3 male and 2 female, from differing backgrounds and with differing expectations regarding their use of drugs. One

reported that heroin reduced sexual performance and drive; another reported that heroin was an aphrodisiac.

Often the person who has become convinced that a certain drug will have a specific effect on him will react to that drug differently than another person with contrary expectations.

Except for heroin, there are no reliable scientific studies of the relationship of drugs to sexual performance in the human being. Psychological and social factors contribute relatively more to behavior than the pharmacologic action of the drugs.

Recent studies of cyclazocine in the treatment of narcotic addicts are cited. A sufficient amount blocks the action of opiates and a person who is addicted to opiates will experience withdrawal symptoms if given cyclazocine. Increase of libido has been noted in men. Since there may be several reasons for this effect, the author is reluctant to draw conclusions concerning drug effect on sexual function.

While the use of drugs among the middle aged may be motivated by a desire to rejuvenate sexual prowess, this is true only for a minority of young adults. Youths primarily look for intensification of the moment, which may include heightened sexuality.

CONCLUSION

Marijuana, LSD, and the other psychedelics have not been shown to have any specific sexual stimulating function.

This article adds further evidence to the author's contention that there is no readibly discernible relationship between drug ingestion and sexual behavior. The history of the individual and his current psychological status contribute to the totality of his behavior, including sexual behavior.

Gay, George R. and Sheppard, Charles W. Sex-crazed dope fiends! Myth or reality? In: Harms, Ernest, ed. Drugs and Youth: The Challenge of Today. New York: Pergamon Press, 1973. pp. 149-163.

DRUG	Multi-Drug
SAMPLE SIZE	50
SAMPLE TYPE	Volunteer
AGE	50 Adults
SEX	25 Male, 25 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Berkeley, California
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	34

SUMMARY

This study was undertaken to evaluate the validity of traditionally held, emotionally charged points of view regarding the relationship of drugs to human sexual functions, i.e., that drugs are considered as aphrodisiacs which contribute to loose morality and sexually promiscuous practices. These view points are illustrated with liberal quotations from published sources. The authors also hoped to document some of the drug and sex practices of the young drug-using subculture.

A series of 50 interviews was held with a random sample of patients seen at the Haight-Ashbury Free Medical Clinic in Berkeley, California. The sample consisted of an equal number of experienced male and female drug users. Questions focused on the use of drugs in conjunction with sex.

Two tables present the drug experience of the sample and the general subjective "sex-drug" responses. Findings are presented in narrative form by type of drug.

Results showed a wide range of individual responses. Marijuana was reported as the one drug which most enhanced sexual pleasure. Drugs are classified and discussed in two groups: drugs which stimulate sexual activity and drugs which decrease sexual activity.

Drug and sex practices among the general subculture population are reported, based on previous studies by the authors and others. The authors emphasize the sophistication of the new generation.

METHODOLOGY

In an attempt to evaluate the effects of various drugs on sex practices, a series of 50 intensive confidential interviews was conducted with patients seen at the Haight-Ashbury Free Medical Clinic in Berkeley, California. A random sample of 30 patients (15 male, 15 female) was selected from the Heroin and Drug Detoxification Clinic and 20 patients (10 male, 10 female) from the General Medical Clinic. The age-range was 18-30 years; the mean age 24.

Free subjective expression was encouraged and the sessions were tape recorded. Individuals were interviewed singly, as cohabitating couples (heterosexual and homosexual) and as commune groups in which group sex was often practiced.

The male-female and partner-partner cross checks were built-in to provide validity of responses.

Drug use was defined as marijuana more than 30 times, more than 10 psychedelic trips, intravenous amphetamine use more than 10 times, cocaine use over 30 times, barbiturate and alcohol use daily for extended periods.

FINDINGS

Respondents were generally uninhibited and articulate. The authors feel there is no significant doubt about the reported drug use or sexual behavior, based on the norm for this population. The Medical Clinic sample had less involvement with drugs than the Heroin and Drug Detoxification Clinic sample, providing a non-addict control population in the same sub-culture. An extremely wide range of response was noted.

Findings by type of drug are summarized here.

Alcohol:

The sex act was rarely enhanced by alcohol (4 out of 50 patients). The physiological effect is seen as one of disinhibition and loss of sexual ability.

Marijuana:

The one drug which most enhanced sexual pleasure (40 out of 50). The physiological effect would appear disinhibitory, of a sedative and mildly psychedelic nature.

Barbiturates

The sex act was rarely made more pleasurable (2 out of 50 patients). Loss of sexual ability was reported with high dosage.

Amphetamines

The sexual drive was greatly augmented with intravenous use of amphetamines (30 out of 36 "speed freaks"). Erection occurred simultaneously with injection (10 of 18 males). Orgasm occurred upon injection (3 of 18 females).

Cocaine

Reports were similar to amphetamines, except that because of its expense, cocaine was usually saved for sexual situations. Erection occurred simultaneously with injection (10 of 20 males). Two males reported long painful episodes of priapism, lasting 24 hours or more.

Amyl Nitrite

Described as a "head and body trip," this drug was used by virtually all respondents at insertion or directly before climax.

Psychedelics

LSD did not have an aphrodisiac effect (44 out of 48). None of the respondents reported pleasurable sex experiences while on STP.

MDA, used in conjunction with sex by 15 out of 20 respondents, was reported to have a sexually stimulating effect.

Heroin

Respondents reported very little genital sexual activity while on heroin; they engaged in intercourse on the average of once a month.

CONCLUSIONS

The authors drew upon their own experiences at the Haight-Ashbury Clinic and the reports of other studies in reaching their conclusions. Each sexual response reported was as highly dependent on the particular physical setting and the individual's psychological "set" as

on the drug itself. All drugs tended to bring out the fundamental personality traits.

In general, the authors concluded that the drugs studied can be grouped into two classes:

1. Drugs which stimulate sexual activity by:

    a. releasing inhibitions (alcohol, barbiturates, other sedative hypnotics in small doses) or

    b. directly stimulating sexual desire (amphetamines, cocaine). Marijuana seems to fit both (a) and (b).

2. Drugs which decrease sexual activity by diminishing desire and decreasing potency (heroin, narcotic analgesics, high doses of barbiturates and alcohol).

The psychedelic drugs do not seem to fit neatly into either category since at times they create increased sexual enjoyment but may also create physical incoordination and lack of concentration on the sex act.

The authors suggest that the contemporary availability of casual sexual contact (sex without guilt) may present some adjustment problems to the new society, which rationalizes drug use to add excitement to sex or drug use as an escape from sex.

For most of the respondents, however, the use of drugs in conjunction with sex was of transitory importance; they almost invariably returned to natural sex.

Linken, Arnold. A study of drug-taking among young patients attending a clinic for venerealdiseases. British Journal of Venereal Diseases, 44:337-341, 1968.

DRUG	Multi-Drug
SAMPLE SIZE	252
SAMPLE TYPE	Treatment (outpatient)
AGE	Adults (Under 30)
SEX	26 Male; 20 Female
ETHNICITY	White
GEOGRAPHICAL AREA	London, England
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews; Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	5

SUMMARY

This was a questionnaire survey, based on the assumption that study of a population of young people in need of treatment for venereal disease would yield significant knowledge concerning other purportedly related social behaviors. The study was exploratory in nature, and had three main purposes: (1) to determine if patients with venereal disease were experienced in drug taking; (2) to test the reliability of a self-administered questionnaire as a research tool; and (3) to decide if further, more extens ve research would be of value in learning about drug-taking behav or among the young people of Great Britain.

The questionnaires were administered in the waiting room and examining offices of the venereology department at Middlesex Hospital in London. They yielded descriptive information concerning the socio-cultural backgrounds of the patients, as well as their current lifestyles, values and social attitudes.

For the purposes of this study "drugs" were treated as any chemical agent, taken internally for other than medicinal purposes. Of the patients polled, 18.2% indicated that they had experimented at least once, with a variety of substances.

METHODOLOGY

The population studied was a group of patients seeking treatment at the clinic mentioned above; the technique used for sample selection was not mentioned. However, 252 persons, male and female and all under the age of 30, were asked if they had had any drug-taking experiences. Of these, 18.2% or 46 (26 of a total of 165 males; 20 of a total of 87 females) indicated an affirmative response. This latter group was given a 23-item questionnaire to complete. There was no further questioning of the non-drug-taking group.

FINDINGS

The mean age of the sample was 21.1 years, with the males being slightly older (22.9) than the females (19.2).

With the exceptions of 1 Italian, 1 German, and 1 West Indian, the sample was comprised of White United Kingdom or Commonwealth subjects.

Only 5% of the sample showed employment mobility, and 88% were regularly employed.

Only 4 cases (8%) were homosexually oriented. Whereas all 4 of these cases were defined as sexually promiscuous, only 6 of the heterosexually oriented were so defined.

With respect to drug usage, 25% had experimented only once; 50% were defined as "occasional" users; 25% were defined as "regular" users. The drugs used included: hashish (32%); amphetamines (25%); L.S.D. (6%); and heroin (1%).

In addition to measuring the above mentioned characteristics of the drug-using group, the questionnaire was geared toward assessing several attitudes of the respondents toward drugs. It was found that few (30%) had revealed their drug experience to their parents and that fewer still (18%) felt they would give drugs to their teenage brothers and sisters. In addition, 76% indicated that they felt that heroin was harmful.

An attempt was made toward assessing the effect of the respondents' drug usage on their lifestyles. The results showed that 16% of the respondents had been under psychiatric treatment, although not necessarily because of problems associated with drugs. A total of 4 had sought a physician's help because of their drug taking.

In comparing drug use frequency to that of alcohol consumption, no effect of the one on the other was apparent.

Of the respondents, 44 had had sexual intercourse before the age of 20. Six males indicated that drugs increased their potency, whereas 9 females reported their libido was increased under the effects of drugs.

CONCLUSIONS

From the results obtained, the authors have concluded there are drug users among patients attending a venereal disease clinic, and that these are a valuable group to study for further understanding of "behavioral diseases." In addition it is their opinion that the self-administered questionnaire is an effective tool for such study.

Ponting, L.I., and Nicol, C.S. Drug dependence among patients attending a Department of Venereology. British Journal of Venereal Diseases, 46:111-113, April 1970.

DRUG	Multi-Drug
SAMPLE SIZE	206
SAMPLE TYPE	Treatment (outpatient)
AGE	Adults
SEX	146 Male and 60 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	London, England
METHODOLOGY	Case Studies
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	1968
NO. OF REFERENCES	2

SUMMARY

During a three year period, 3.1% of patients of all ages attending a venereal disease clinic in London had had experience with drugs. The users were divided into three groups: those who had taken drugs once only, occasional users, and regular users, but not necessarily dependent.

It was found that the majority were occasional users. The drugs of choice were hashish and amphetamines; of the latter, 24 males and 11 females had taken methedrine.

METHODOLOGY

Data were obtained from 146 male and 60 female drug users who attended a Venereology Clinic in London in 1968, representing a portion of the drug users attending this clinic over the preceding three years. The 206 persons who were interviewed were cooperative and no one refused to answer questions.

FINDINGS

Of the 60 females, 22 were solely cannabis users and 18 used only amphetamines. The remaining 20 had experimented with a number of drugs. Two who were addicted admitted to being pushers so as to obtain extra drugs; of the other 2, one was addicted to heroin and the other to amphetamines.

Of the 146 males, 66 were solely cannabis users, 21 used only amphetamines, 1 had experimented with opium, 1 was addicted to heroin, 1 to amphetamines. Three males were pushers; 45 had experimented with a number of drugs.

The majority had been introduced to drugs by friends. The greatest number of males and females were semiskilled and were regularly employed. Fifteen males and 9 females had had psychiatric treatment, not necessarily for drug use. The majority were occasional users who took the drugs on the weekends or in the evening. Their heterosexual relationships were mainly casual.

Many felt that the use of cannabis should be made legal. There was a general feeling that too much publicity was given to the drug habits of well-known people.

Some of the reasons given for drug use were: the need to keep awake, for kicks, curiosity, boredom, depression, relaxation, escape from reality.

Nineteen males and 8 females (including 4 prostitutes) had been in trouble with the police, not necessarily for drug use.

The findings of the study in terms of sexual orientation were as follows:

Sexual Orientation	Male	Female
Heterosexual:		
Steady	18	21
Casual	82	28
Paid	8	4
Homosexual:		
Steady	1	-
Casual	11	-
Bisexual	5	-
Married	24	7
Extramarital sexual intercourse	15	3

Saghir, Marcel T., et al. Homosexuality. IV. Psychiatric disorders and disability in the female homosexual. American Journal of Psychiatry, 127(2):147-154, August 1970.

DRUG	Multi-Drug
SAMPLE SIZE	100
SAMPLE TYPE	Volunteer
AGE	Adults
SEX	Female
ETHNICITY	White
GEOGRAPHICAL AREA	San Francisco, California Chicago, Illinois
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	1967-1970
NO. OF REFERENCES	14

SUMMARY

A systematic study of 57 homosexual women and 43 single heterosexual controls was made. The present report is limited to clinical psychiatric findings and includes data on affective disorders, alcoholism, anxiety-phobic neurosis, drug abuse, hysteria, antisocial personality, obsessive-compulsive neurosis, schizophrenia, and paranoid states. Findings show a significantly greater prevalence of the disorders studied in the homosexual sample. There was also a trend to greater prevalence in individual neuroses and personality disorders, but only suicide attempts, excessive drinking, the use of nonprescription drugs, and dropping out of college reached levels of statistical significance. The same findings were true when homosexual females were compared with homosexual males in an earlier study.

Despite these findings, only a minority of homosexual women showed significant functional and personal disability. The majority could achieve, adapt, and were productive citizens. Homosexuality was shown to be compatible with functional and interpersonal productivity, with a slightly higher risk of having a psychiatric disorder or an interpersonal conflict.

METHODOLOGY

A structured interview was used on a representative sample of homosexual women ranging in age from 20 to 54, and single heterosexual women aged 21 to 50. Both samples were Caucasian, held relatively high level jobs, and had very similar income. The Chi-square test with the Yates correction for continuity was used as a test of significance; a p value of .05 or less was accepted. Disability was expressed as none or slight, or as moderate or marked.

FINDINGS ON DRUG USE

Of the homosexual women, 51 percent had used drugs compared to 9 percent of the heterosexual. The major drugs were marijuana and amphetamines. Twenty-four of the homosexual users, and all the heterosexual had used these drugs only. One homosexual used only barbiturates. Four others used barbiturates, hallucinogens, or amyl nitrate as well. Four (7 percent) of the homosexual, but none of the heterosexual were dependent or excessive users.

Fifty-one percent of the homosexual women as against 39 percent of the homosexual men had experimented with drugs. Seven percent of the women vs. 2 percent of the men were dependent or excessive users. The most frequently used drugs were marijuana and amphetamines.

Winick, Charles and Kinsie, Paul M. The Lively Commerce: Prostitution in the United States. Chicago: Quadrangle Books, 1971. 320 pp. (238 references).

SUMMARY

Over a 10 year period more than 2,000 people were interviewed for this book, including representatives from every level in the network of prostitution and the communities affected. Only sections dealing with drugs and prostitution are abstracted here.

It has been mainly since 1939 that drugs have been associated with prostitution. This situation appears to be an outgrowth of the change in controls in the business of prostitution. The disappearance of the protective atmosphere of the brothel and the madame could be a reason for the prostitute's move toward drug addiction.

Females: Characteristics of Addict Prostitutes

Certain large cities were found to be centers for addict prostitutes because of the availability of drugs. Nearly 50% of the prostitutes in big cities were addicted to drugs.

Addict prostitutes were frequently used as police informers with the understanding that they would receive special attention in sentencing.

Few prostitutes reported that their work was in any way hampered by the use of drugs. Most clients were not aware that the prostitute was on drugs.

Many women reported the onset of addiction occurred simultaneously with entry into prostitution. The authors could not state the usual order of occurrence with any accuracy based on the evidence compiled. However, they cite a New York study in which drug addicted prostitutes made up 8.5% of those arrested as first offenders, 25.5% of those with 5 arrests, 52% of those arrested from 11-15 times, and 70.8% of those charged more than 20 times as evidence of the possibility that drug use precedes prostitution.

The addict prostitute appears to follow a pattern which involves periods of abstention followed by drug use and prostitution and back again to abstention. Many prostitutes leave prostitution when they reach their 30's, a cycle which coincides with the tendency of drug addicts to move away from addiction around the age of 35.

Prostitutes may be leaving the field when they no longer have a habit to support.

Males

Many male prostitutes were addicts attempting to support their habits. Adolescent males frequently used this method to buy drugs. Use of amphetamines and marijuana was found among male prostitutes.

Over the past 40 years, pimps have been known to be drug addicts, using the prostitutes to pay for their own habits. Pimps interviewed for this study frequently sold drugs to their own women.

Use of Heroin

The addicted prostitutes preferred heroin, but they offset the resulting emotional apathy by combining heroin with cocaine for an added boost. Heroin has been found to impede psychotic symptoms and allow users to function nearly normally. This would allow prostitutes with severe psychological problems to perform their jobs with minimal pressure and strain.

By relaxing anal sphincter muscles, heroin has also been reported to aid in anal intercourse. Male prostitutes reported that shooting up with heroin before having sexual relations helped prolong the erection.

II. MARIJUANA

Goode, E. Drug use and sexual activity on a college campus. American Journal of Psychiatry, 128 (10):1272-1276, April 1972.

DRUG	Cannabis
SAMPLE SIZE	564
SAMPLE TYPE	Students
AGE	Not Specified
SEX	Not Specified
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Stony Brook, New York
METHODOLOGY	Survey
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Spring 1970
NO. OF REFERENCES	0

SUMMARY

Examining the relationship between sexual behavior and drug use, this study aimed at discovering differences between the sexual patterns of drug using and non-drug using college students. Sex and drug use appeared to be closely related on the college campus.

Undergraduate students in a lecture class were asked to complete a questionnaire which asked about their sexual experiences and their drug experiences. Despite possible validity problems considering the delicacy of the subject matter and the possible tendency to falsify answers in such situations, the data were found to be valuable for use in a provisional and exploratory manner.

Most significantly, it was found that regardless of the specific indicators or control variables used, the relationship between sex and drug use was a very tight one.

The drug use indicators were: frequency of marijuana use (if ever) over the period of 6 months preceding the study, and the total number of drugs experimented with at least once. Sexual indicators were: frequency of engagement in sexual intercourse (if ever) over the 6 month period preceding the study, age of first experience, and total number of sex partners.

In addition, two control variables were used: gender and college class.

Those students who used drugs were found, with greater frequency, to be the ones who were sexually active. They also were found to have been more precocious, to have had a more regular sex life and to have experienced sex with a more diverse selection of partners than non-drug users.

METHODOLOGY

A questionnaire designed to relate the use of drugs to sexual activity was given to 564 undergraduate students, all enrolled in a lecture course. The author recognized the validity problem inherent in asking questions about sensitive subjects like sex and drugs. Because of the surreptitious and prohibitive elements surrounding the use of drugs and sexual activity, there was no real guarantee that answers were not falsified. However, it was felt that the data could be used in an exploratory, provisional manner.

The measures used to indicate a student's degree of involvement with drugs were:

- whether marijuana had been used at least once
- frequency with which marijuana was used in the last six months
- total number of drugs ever experimented with at least once

The measures used to indicate the student's sexual activeness were:

- whether student had engaged in premarital intercourse
- frequency of sexual intercourse over the past six months
- age at which the first sexual experience occurred
- total number of sexual partners.

FINDINGS

Positive correlations were found between all sexual activity measures and all drug use measures. Three hundred eighty-nine students claimed to have tried marijuana at least once. Of those 389 students, 72 pertent claimed to have had sexual intercourse at least once.

Significantly, of the 150 students who did not smoke marijuana, 66 percent had never engaged in sexual activity at all.

Tendency toward premarital sex was found to be directly related to the frequency of marijuana use. The greater the use of marijuana over the six month period prior to the study, the greater the chance of premarital sexual activity. Eighty-five percent of the students who used marijuana at least three times a week had had sexual intercourse. On the other end of the scale, only 37 percent of the students who had not smoked marijuana in the six month period prior to the study had ever engaged in sexual intercourse.

It was found that smoking marijuana was also highly correlated with the number of partners with whom the student had had sexual relations. The students who smoked marijuana most were found to be the ones who had experienced sex with a number of partners. Thirty-two percent of the students who smoked marijuana at least 3 times a week had had intercourse with four or more partners. Of those students who had not smoked marijuana at all during the 6 month period preceding the study, only 7 percent had had intercourse with 4 or more partners.

When the researcher used the "total number of drugs ever tried" as the measure of drug involvement, he found that the relationship between drug use and the number of sexual partners still existed in the same way. The student who had experimented with many kinds of drugs was the student who had experienced sex with many partners. Of the students who had not tried any drugs, only 1 in 20 had also engaged in sexual relations with 4 or more partners.

It was found that drug use also paralleled the frequency of intercourse. The more involved with drugs a student was, the higher the likelihood that he would also have experienced intercourse frequently. Thirty-four percent of the drug-taking students as compared to 15 percent of the non-drug taking students had had intercourse at least once a week over the six month period preceding the study. In addition, 76 percent of the non-drug users as compared to 28 percent of the drug users claimed to have abstained from sexual intercourse during the six month period. These figures demonstrated that almost 3 times as much abstinence accompanied nondrug use.

Finally, drug use was found to correlate significantly with sexual precociousness. The age at which the student first experienced sexual intercourse was found to relate to his use of drugs. Of those students who had experimented with four or more drugs, 75 percent had experienced sexual intercourse by age 16. However, of the students who had never used drugs only 1 in 20 had experienced sexual intercourse by age 16. It was found that the greater majority (54 percent) of those who had experimented with 4 or more drugs had had their first sexual experience by age 17. Conversely, only 9 percent of the non-drug users had experienced sexual intercourse by the age of 17. Forty-seven percent of the college students who had never had a drug experience had also never had intercourse, but only 1 student in 14 (7 percent) had not tried drugs but had had sexual

relations by age 16. Of the students who had tried 4 or more drugs, 3 times as many were sexually precocious as were abstemious.

Using the present data the researcher performed a three-variable test controlling for college class and gender.

It was found that men and women who used drugs were significantly more likely to have sexual intercourse, to have it often and with a variety of partners. Only 1 man in 5 (19 percent) claimed never to have experienced sexual intercourse while having experimented with 4 or more drugs. Conversely, 61 percent of the men who had not experimented with drugs had also never experienced intercourse. For the women, 66 percent had never experimented with drugs or had intercourse while 29 percent of the drug users had had sexual intercourse.

Of the students who had engaged in sexual relations with 4 or more partners it was found that only 9 percent of men and 2 percent of women had never used drugs. However, 41 percent of these men and 24 percent of these women had experimented with 4 or more drugs.

Using gender as a control variable, the relationship between sex and drug use remained a close one. Introducing class in college as another control also did not alter the picture. The percentage of virgin marijuana users in the class decreased with age: 40 percent for freshmen; 31 percent for sophomores; 23 percent for juniors, and 15 percent for seniors. The drug users were found to be more sexually active than non-drug users for all college classes.

CONCLUSIONS

The author points out that it was impossible to determine whether sex or drug use was the dependent variable in this situation. It is not possible to say if sex causes drug use or drug use causes sexual activity. The author feels that both sexual behavior and drug use are part of a campus subculture which also encompasses liberal political views, the avant garde in art, separation from the parental generation, authority figures and control agents, and expresses more discontent and alienation from the traditional academic patterns.

The author feels it is unrealistic to choose one of these behaviors as a single cause of the others. Rather students who practice one habit or another, are more likely to develop the other forms of behavior as well. Therefore, as a student moved from no drug use to experimentation and on to frequent or regular usage, he learned to display the attitudes and behavior of a sexually free subculture.

Conversely, such students are to a certain extent at odds with established values before they begin to become involved with drugs. Thus, it is likely, based on the findings, that a student who had experienced sexual intercourse before college, but had not used drugs yet, would become involved with drugs in college. The likelihood of drug use

is greater depending on how early the student began having sexual relations. The author proposes that this correlation between sex and drug use could be explained as a function of extraneous variables. He contends that students who use drugs are also found to have experienced sex earlier, more frequently and with many partners because of a common feature of both sex and drug use.

Goode, Erich. Marijuana and Sex. Evergreen Review, 66:19-21, 72-73, May, 1969.

DRUG	Marijuana
SAMPLE SIZE	200
SAMPLE TYPE	Not Specified
AGE	Not Specified
SEX	Both Male and Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	New York State
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	0

SUMMARY

An informal sampling of male and female marijuana smokers showed that marijuana produces greater excitation during sexual activity. While it does not generally act as an aphrodisiac, men and women reported heightened excitement and enjoyment from sex and marijuana. The author attributes this to the expectation that marijuana will, in fact, produce this result. He also feels that the effect of marijuana reflects whatever the individual user brings to the experience.

METHODOLOGY

An informal survey of about 200 users was conducted. Basic questions about the relationship of marijuana to both sexual desire and sexual activity were asked. The survey included both men and women of unspecified age and occupation.

FINDINGS

More than one-third said that marijuana had no effect on their sexual desire. Five percent said that it had a negative effect. Thirteen percent said that the effect depends on their sexual partner. Forty-four percent replied that marijuana definitely increased their sexual desire. Sixty-eight percent said that marijuana increased their sexual enjoyment.

From the author's informal sample, 74% of the men said that "turning on" turned them on sexually, but only 62% of the women felt the same. The author noted that for both sexes marijuana is more stimulating during the act itself than as an aphrodisiac. The survey also indicated that both sexual stimulation and sexual enjoyment were directly correlated with frequency of smoking.

Three-quarters of the sample said that they had eaten food at least once while high, and of these 90% reported that it was a more gratifying experience than ordinarily. Music, too, became richer and more satisfying to three-quarters of those who had listened to music while high.

CONCLUSIONS

The author states that despite the claim of increased sexual enjoyment while using marijuana, scientists have found that physiologically marijuana, in fact, has the opposite effect. If anything, they say, it reduces desire and dulls the sexual areas. If this is so, questions the writer, why are so many people sexually turned on by it?

One reason may be the association that has been built up in the public's mind, often by anti-marijuana forces, that the drug has been associated with loss of sexual inhibitions. So, if users expect to be "turned on" by marijuana, they often will be. Thus, users' attitudes toward marijuana may determine what happens to their bodies when they smoke it. The article suggests that women seem to respond more strongly than do men to the power of marijuana as an aphrodisiac. Two hypotheses put forth are: (1) marijuana is an aphrodisiac for more women because of its cultural association with sex; women are more likely to think themselves into becoming excited. (2) Women need an excuse to justify their sexual desire. The study reports more men "turned on" by marijuana were excited sexually than women. This discrepancy is

explained by the differences in the characteristic sexual attitudes of men and women in our society.

Marijuana seems to allow detours from the customary channels of experience and permit transcendence of some social inhibitions. It is much more than a chemical; the marijuana experience seems to reflect the self. What the individual users bring to it will determine how it treats them.

Goode, E. Sex and marijuana. Sexual Behavior, 2(5):45-51, May, 1972.

DRUG	Marijuana
SAMPLE SIZE	600
SAMPLE TYPE	Students
AGE	Adults
SEX	Both Male and Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Not Specified
METHODOLOGY	Survey
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	1970
NO. OF REFERENCES	0

SUMMARY

The controversy surrounding sex and marijuana is explored in this article; specifically, whether marijuana is used because of sexual incompetence and then further deteriorates sexual capabilities, or whether marijuana causes sexual behavior of an overactive sort. The relationship between sex and marijuana is seen not simply in terms of the drug's pharmacological properties, but as a total drug experience dependent on subcultural and individual conventions.

Two types of marijuana effects of interest to researchers are discussed: (1) That which can be observed or measured externally by the scientist, called "objective effects", e.g., heartbeat rate. (2) An effect that cannot be observed externally but falls in the realm of the drug experience, or "subjective effects." The overall thrust of the most commonly reported effects appears to be in the direction of the simple, the sensual, the pleasurable.

METHODOLOGY

Data were obtained from the author's study of 200 marijuana users in New York prior to 1969, and the results of a questionnaire distributed to 600 undergraduates at a state university in 1970. Four measures of sexual activity were used:

1. whether or not the respondent had ever engaged in premarital intercourse

2. the total number of different sexual partners he or she had ever had sex with

3. the age at first engaging in intercourse

4. the average frequency of having intercourse in the 6 months prior to the questionnaire.

Three measures of drug use were used:

1. whether or not the respondent had ever smoked marijuana

2. the frequency of smoking marijuana in the 6 months prior to the survey

3. the total number of drugs or drug types the respondent had ever tried or experimented with.

FINDINGS

In the college survey all measures of sexual activity correlated significantly and powerfully with all measures of drug use. There was an almost perfect linear relationship between frequency of smoking marijuana and premarital sexual experience.

Marijuana users were far more likely to have engaged in premarital sex than nonusers. The more frequently marijuana was used, the greater the number of sexual partners reported by the respondents. Marijuana smokers were more likely to have had sex early in their lives.

Among the users 72% had had intercourse at least once; only 34% of the non-users had ever engaged in intercourse.

Among the frequent users (3 times a week or more) only 19% claimed to be virginal; among the respondents who had not smoked marijuana in the previous 6 months, 61% claimed virginity. One-third of the frequent users (32%) said they had had intercourse with 4 or more partners in their lives; this was true of only 7% of the marijuana abstainers.

Among drug abstainers, only 4% said they had intercourse by age 16; this was true of 24% of those who had experimented with 4 or more drugs.

Not only were marijuana smokers more likely to have sex early in their lives but the sexually precocious were more likely to use marijuana.

In a study done by Drs. Hochman and Brille increased sexual pleasure was found to be the second most common response agreed to among chronic marijuana users as an effect of the drug. Of the 200 respondents interviewed for this study (Goode), 68% said that marijuana generally acted as a pleasure enhancer, that it usually increased sexual enjoyment. None of the respondents considered it an aphrodisiac.

CONCLUSIONS

The author concludes that marijuana use does not "cause" sexual behaviors; rather their relatedness is part of a general reflection of the practices and patterns of the drug culture with its accompanying life style. Both marijuana and sexual behavior are dependent on specific socio-cultural background factors.

The "cause" of sexual permissiveness is much the same as the "cause" of a liberal ideology and of marijuana use as well. The origin of all 3 is a culture which is anti-authoritarian and non-traditional in a wide range of ways.

The author views the drug culture as a life style which appears well on the way to becoming conventional and standard among very large segments of respectable, conforming members of society. Thus, it cannot be ignored. Beliefs and practices that are the cultural margin eventually become the cultural center. Marijuana seems to be destined to become a less marginal part of our culture.

Kolodny, Robert C., et al. Depression of plasma testosterone levels after chronic intensive marijuana use. The New England Journal of Medicine, 290(16):872-874, April 18, 1974.

SUMMARY

The study hoped to ascertain the reproductive status of young men who used large amounts of marijuana for an extended period. Twenty heterosexual males aged 18-28 who used marijuana, but no other drugs, at least 4 days a week for 6 months were studied. Mean (± S.E.M.) plasma testosterone (416 ± 34 ng. per 100 ml.) was significantly lower than in an age-matched control group (mean 742 ± 29 ng. per 100 ml.) who had never used the drug. Decreased testosterone was dose related. Marked increases in testosterone were produced by stimulation with human chorionic gonadotropin during continued marijuana use, and by abstention from use.

Measurements of liver function, circulating gonadotropins, prolactin, cortisol and thyroxine were normal; 35% (6 of 17) showed oligospermia; 2 were impotent. The data suggest that chronic intensive use of marijuana may produce alteration in male reproductive physiology through central (hypothalamic or pituitary) action.

METHODOLOGY

The study tested 20 heterosexual men aged 18-28, all using marijuana at least 4 times a week for at least 6 months, who met the following criteria: no history of illegal drug injection, of ingestion of hallucinogens, amphetamines, barbiturates, cocaine, narcotics, hypnotics or sedatives for 6 months, of androgens or estrogens administered; of endocrine disease, of hepatitis or other liver disease; and no alcohol intake exceeding 415 ml. weekly. A medical history was obtained from each subject, and all underwent physical examinations. Venipuncture and semen examinations were performed. Four subjects were stimulated with human chorionic gonadotropin for 4 days while continuing marijuana use. Three subjects discontinued use for 2 weeks after samples had been obtained during a control period, and samples were then taken on the 7th and 14th day of abstention.

Twenty heterosexual men, matched for age and cigarette smoking, who had never used marijuana, served as controls. Plasma testosterone concentrations were measured by radio immunoassay. Measurements were taken of plasma prolactin, plasma luteinizing hormone, plasma follicle-stimulating hormone, plasma cortisol and total plasma thyroxine, as well as hepatic function and hormone determination.

FINDINGS

Mean (± S.E.M.) plasma testosterone concentration for controls was 742 ± 29 ng. per 100 ml. Mean (± S.E.M.) concentration for all users was 416 ± 34 ng per 100 ml. For subjects using 5-9 "joints" per week it was 503 ± 40 ng and using 10 or more "joints" 309 ± 34 ng. Stimulation with human chorionic gonadotropin resulted in testosterone increases of 121 to 269%, while normally at least 50% increase is seen. The subjects who abstained from use showed a pronounced rise in plasma testosterone (57 to 141%) by day 7 with a further but less pronounced rise by day 14. Sexual functioning was unimpaired in all but 2 subjects. For other measurements taken, there was a significant difference in mean follicle-stimulating hormone levels in those using 10+ joints a week compared to those using 5 to 9. All other measurements were normal. Six of 17 men had sperm counts less than 30 million per milliliter. Sperm count differences between 10+ joint users and 5-9 joint users were statistically significant.

CONCLUSIONS

Findings are very suggestive of a specific metabolic derangement in human users of marijuana. The report is strengthened by evidence of subject's swift return to normal testosterone levels upon abstention or stimulation with human chorionic gonadotropin. It seems likely that diminished concentrations were due to decreased testicular output of androgen secondary to central suppression. The possibility of depressed fetal testosterone levels during critical stages of sexual differentiation must also be considered. Use by pre-puberal males may delay puberty. Further investigation is recommended. Since testosterone levels are correlated with aggression and marijuana use appears to have a suppression effect, this behavioral change may be related to diminished testosterone level. Contrary to other studies, the data show no evidence of hepatic damage consequent upon chronic intensive use, nor gynecomastia, nor elevated prolactin levels. Despite anecdotal accounts of heightened sexual drive, the data suggest the possibility of adverse effects of use on male sexual functioning.

Marihuana and sexual behavior. In: Marihuana: A Signal of Misunderstanding. The Technical Papers of the First Report of the National Commission on Marijuana and Drugs. Appendix , Vol, I. Washington, D.C.: U.S. Government Printing Office, March 1972, pp. 434-439.

SUMMARY

In reviewing the literature, the Commission addresses itself to the question of the truth of various popular beliefs and the findings of previous studies as they relate to the use of marihuana and sexual behavior (desire, arousal and performance). The key question to society is the likelihood of sexual excess on the part of the user: the extent to which marihuana acts as a catalyst to sexual aggression, profligacy, promiscuity and other aberrant sexual behavior.

The review is divided into three parts: (1) Marihuana and Psychosexual Stimulation; (2) How Marihuana Influences Sexual Response; and (3) The Effects of Marihuana on Overt Sexual Behavior. Independent investigations undertaken by the Commission are included.

The Commission concludes that although marihuana increases psychosexual stimulation in substantial proportions of users and serves as a relaxer of sexual inhibitions and restraints, it is not an aphrodisiac nor does it lead to sexual excess and abuse.

Marihuana and Psychosexual Stimulation

The Commission notes that the belief regarding the stimulant effects of marijuana and the use of hemp drugs to achieve sexual arousal, the improvement of sexual powers and the prolongation of coition have existed for centuries and have been documented. However, the proportion of the population actually aroused sexually by marihuana is difficult to assess. Relevant research findings are based on widely divergent research procedures, differing criteria of arousal, and variations in the amount of arousal experienced.

They conclude that at best the evidence is inconclusive. It has been shown that marihuana produces heightened sexual interest, desire and arousal in substantial proportions of both male and female users, but also that marihuana does not increase sexual desire. In fact, it may decrease sexual desire or stimulation in significant proportions of users.

Perhaps the most conclusive and consistent findings to emerge from studies of the effects of marihuana on psychosexual stimulation is that the degree of sexual interest, desire and arousal induced by marihuana is dependent on the characteristics of the user and the extent to which he comes to anticipate such an effect. Research shows that

women are more likely to report heightened sexual desire than are men; that young people more frequently report arousal than do older persons; that frequent users are more likely to report increased sex interest than infrequent users; that persons who are more sexually experienced are more likely to be sexually aroused by marihuana than are those less sexually experienced and that those who expect to be sexually aroused by the drug are more likely to be so aroused than those who do not.

There is nothing inherent in the drug itself which produces heightened sexual interest, desire or arousal, nor is there any physiological evidence to show that marihuana directly or specifically acts on either the sexual centers of the brain or the sexual organs. What is evident is that marihuana is not an aphrodisiac.

How Marihuana Influences Sexual Response

If marihuana is not in itself an aphrodisiac, to what can be attributed the reported increased sexual interest, desire and arousal following the use of the drug in a substantial number of persons?

Research bearing on this question suggests that to the extent that marihuana influences these responses, it does so indirectly by acting on the higher centers of the brain to relax inhibitions and reduce the usual restraints on behavior. Thus, the user is more free to respond to his sexual needs and desires. The extent to which these responses occur, however, are dependent upon individual expectation and knowledge and the social situation (set and setting) in which the marihuana use takes place.

In addition to its effects on sexual inhibition and restraints, marihuana is also reported to intensify aesthetic experiences and enhance sensual activity. Thus, substantial proportions of marihuana users characterize their sexual experiences under the influence of the drug as particularly intense, prolonged, sensuous and pleasurable.

In the Commission's own National Survey, respondents were asked to indicate whether or not they believed that marihuana increases sexual pleasure. Of those adults admitting they had tried marihuana at least once (15%), 52% thought that the drug does increase sexual pleasure. Both adults and youth in general, however, seemed to be less certain of this effect. Only about one-fourth of all respondents (24% of the adults and 26% of the youth) indicated agreement with the statement while slightly under one-half of those surveyed (48% of the adults and 49% of the youth) expressed uncertainty about marihuana's ability to increase sexual pleasure.

The research bearing on the effects of marihuana on sexual pleasure suggests that marihuana is not usually perceived by the general public to increase sexual enjoyment, that users are significantly more likely to believe that marijuana has this effect than are non-users, that those who expect to receive increased sexual pleasure are

more likely to experience it than those who do not, and that frequent or regular users are significantly more likely to have actually experienced this effect than are those who use the drug less frequently.

The Effects of Marihuana on Overt Sexual Behavior

The Commission concludes that research findings which are available lend little support to the thesis that marihuana either causes or is a significant factor in the heightening of sexual aggression or the commission of sexual offenses.

Research suggests that although marihuana users are more sexually active and sexually permissive than are non-users, marihuana does not generally stimulate sexual activity, appreciably alter established patterns of sexual behavior, or serve as a catalyst to sexual promiscuity. The Commission notes however that there are several contradictory findings in previous research.

In a Commission-sponsored mail survey aiming to develop a profile of the regular marihuana user, 781 judges, probation officers, and court clinicians were asked: "In light of your professional experience, do you think all, most, some, or just a few of the people who regularly use marihuana are sexually promiscuous?" Responses revealed considerable uncertainty and ambivalence among all three groups. Twenty-three percent of the total sample either did not answer the question or stated that they did not know, and three-fifths of those who responded (701) responded that "some" could be characterized in this manner.

The Commission also found that marihuana users are rarely sexually aggressive and that persons arrested for marihuana law violations generally do not have previous or subsequent criminal records of sexual offenses.

In two Commission-sponsored studies of the relationship between marihuana and crime, no evidence was found to suggest that marihuana is a significant factor in or contributor to the commission of sexual offenses.

III. AMPHETAMINES

Angrist, Burton and Gershon, Samuel. Some recent studies on amphetamine psychosis - unresolved issues. In: Ellinwood, Everett H. and Cohen, Sidney, eds. Current Concepts on Amphetamine Abuse. Proceedings of a workshop, Duke University Medical Center, June 5-6, 1970. Washington, D.C.: U.S. Government Printing Office, 1972. pp. 193-204. (24 references).

SUMMARY

In this study all admissions to Bellevue Psychiatric Hospital were reviewed daily for a period of approximately two years. Those patients who gave a history of amphetamine use, in whom symptoms developed during the time of the drug's pharmacological action, and who took doses larger than those usually prescribed were included in the series. A patient with established schizophrenia who happened to be taking 10 to 15 mg of amphetamine per day for weight reduction would not, for example, have been included. Undoubtedly many cases were missed, partly because some patients concealed their ingestion of drugs and partly because psychiatrists in a busy admitting room have a tendency to diagnose patients with symptoms of amphetamine intoxication as schizophrenic.

Two interviews were conducted with each patient selected for inclusion: one as soon as feasible after admission, to document the presenting symptoms; the second, after symptoms cleared, to assess historical features with a semistructured questionnaire.

The mean age of these patients was 25.2 years. While predominantly white (52 out of 60), they were, as a rule, not of "upper-" or "middle-class" background. Experience with other drugs was extensive. Occupational adjustment was extremely poor.

Disturbances of sexuality were prominent. Eleven of the 45 males were practicing homosexuals; females were frequently bisexual. Eight males reported "marathon" sexual relations, resulting from a combination of intensified sexual feelings and delayed ejaculation. Females frequently reported intensified sexual fantasy and compulsive masturbation or promiscuity.

Data on the amounts of amphetamines taken must be considered approximations. The mean "usual" dose for those who took amphetamines orally as "diet pills" was 165 mg. daily, but this is almost certainly a conservative estimate for the group as a whole. Thirty-three patients used intravenous black-market amphetamine preparations of uncertain potency and purity.

Bell, D. S., and Trethowan, W. H. Amphetamine addiction and disturbed sexuality. Archives of General Psychiatry, 4:74-78, January 1961.

DRUG	Stimulants
SAMPLE SIZE	14
SAMPLE TYPE	Not Specified
AGE	Adults
SEX	8 Male; 6 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	Sydney, Australia
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Observations
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	12

SUMMARY

This study investigated the effect of amphetamine addiction upon sexuality. Fourteen patients possessing similar drug-use backgrounds were observed. The patients' pre-existing level of sexual adjustment was seen to determine the kind of sexual behavior demonstrated with addiction to amphetamines.

In cases where patients had demonstrated inhibition in sexual relations prior to addiction little or no change was seen with the advent of addiction. However, a few cases demonstrated a regression to a lower level of sexual adjustment, nearly infantile in some cases, which was accompanied by a tendency towards perversion.

The opposite kinds of results were also found. Some cases experienced prolonged orgasm, increased desire and promiscuity with the use of amphetamines.

The findings appeared to confirm the medical premises that amphetamine increases the libidinal drive, sexual desire is enlarged and the breakdown of defenses can take the form of regression when the equilibrium is altered. However, in conclusion the researchers felt that the sexual tendencies displayed with the use of amphetamine are dependent and strongly related to the patients' former sexual behaviors and adjustments.

METHODOLOGY

Fourteen patients who had been addicted to amphetamines were observed. Eight were male, 6 were female; all were between the ages of 22 and 49. One male was married, four males were single, one male and two females were divorced, two males and three females were separated from their spouses, and one female was living adulterously.

All of the patients shared a common feature: they had each been subject to psychotic occurrences during addiction; however these incidents discontinued once amphetamine was withdrawn. There were no individuals in the sample who had been using other drugs or who had any related diseases.

FINDINGS

A preliminary investigation was made of the patients' previous sexual history. The investigation produced evidence of abnormal adjustment in all but one case. It was found that this person had been incapable of maintaining an adequate relationship with any partner. Although most of the patients had experienced abnormality in their sexual relations, no one type of abnormality was common to all.

Some degree of inhibition and frigidity was found to have existed in 7 patients before addiction. Two of these became promiscuous when addicted. Prior to addiction four of the patients had demonstrated perversion and/or homosexuality in sexual relations. Genital primacy had been precariously established in two cases where there was a pre-existing condition of poor marital adjustment.

In four cases little or no change in sexual drive was detectable with the addiction to amphetamines. Two of the cases demonstrated an increase in heterosexual promiscuity, in one case accompanied by evidence of conflict over repressed homosexuality. One heterosexual woman who had been frigid experienced an increase in masturbation desires. On one occasion, when given an injection of methylamphetamine, this woman experienced sexual fantasies and erotic sensations akin to those present during masturbation.

One male, who had already demonstrated signs of inhibition, felt even less of an inclination towards sexual performance. However, the patient did experience an increase in pleasure with masturbation. One male homosexual who was married but had difficulty adjusting to a heterosexual life, found himself nearly impotent after taking amphetamines.

Five cases displayed an increase in sexual drive with use of amphetamines. Three of these cases experienced prolonged erection and delayed ejaculation. One of these women also experienced a delay in sexual orgasm.

Those patients who displayed signs of perverted sexuality before amphetamine use, were found to increase this tendency when using amphetamines.

CONCLUSION

Analysis of the results showed that amphetamine addiction produced no effect upon sexuality in 5 cases, a decrease in desire in 3 cases, and an increase in desire and erotic sensation in 5 cases. One case did not provide enough data for analysis.

The authors believed that the stimulant properties of amphetamine would increase sexual drives but in such a fashion as to produce the result of repressed infantile sexuality. According to the findings, this is, in effect, what did happen.

With this sample of patients, various behaviors and combinations thereof were displayed with regard to previously inhibited persons: no apparent change; denial; regression; increased perversion or diversity of perverse activities.

A comparison is drawn between amphetamine addiction and cocaine intoxication, based on these findings and those of Clark and Mayer-Gross on cocaine. Cocaine was said to also increase sexual drive but could not be held responsible for transference from heterosexuality to homosexuality. The authors hold that the form of behavior displayed is dependent solely upon the existing patterns of sexual adjustment found in the individual before amphetamine usage.

Greaves, George. Sexual disturbances among chronic amphetamine users. Journal of Nervous and Mental Disease, 155(5):363-365, November 1972.

DRUG	Stimulants
SAMPLE SIZE	50
SAMPLE TYPE	Treatment (outpatient)
AGE	Adolescents, Adults (16-28)
SEX	28 Male, 22 Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	More Than Two Cities
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	7

SUMMARY

This study compared a group of amphetamine users between the ages of 16 and 28 with a group of psychiatrically disturbed non-drug users of the same sex and age distributions. The sexual behavior of amphetamine users was examined with the objective of determining whether there existed a more significant degree of sexual pathology among drug users than among non-drug users. Both groups were interviewed using the same questions about sexual activities. Attention was paid to the attitudes and practices of

respondents. Some of the areas on which the study concentrated were: amount of sexual experience; promiscuity; overall feelings about sexual activity; satisfaction vs. dissatisfaction with sex; normative vs. non-normative sexual views.

Several conclusions were reached, showing some differences between the groups. In general, the amphetamine users were more promiscuous, more sexually advanced and experienced, and less satisfied with sex. The non-drug users were more conventional and idealistic in their sexual attitudes, more satisfied with sex and more normative in their views. The data showed differences but failed to support the hypothesis that drug use is either a replacement for sex or a contributing factor to sexual pathology. The hypothesis was generated instead, that the cause for sexual disturbance and drug use is more likely a personality factor which as yet is unidentified.

METHODOLOGY

The purpose of this study was to assess the sexual attitudes and behavior of drug users in order to determine whether they, more than non-drug users, demonstrated unusual sexual feelings and behavior. Such a finding could have suggested a drug-related cause.

A group of 14 unmarried male and 11 unmarried female amphetamine users, ranging in age between 16 and 28, was chosen to be studied. A like number of psychiatrically disturbed, outpatient, non-drug users was matched by sex, age and personality patterns to the amphetamine users and formed the control group. In selecting the control group an effort was made to choose patients who demonstrated some form of "personality disorder," as this was a condition found in prior studies to exist among chronic drug users.

Respondents in this study were given interviews which ranged in duration from 1 to 3 hours. Locations, settings, and conditions varied. All non-drug users were interviewed in psychiatric surroundings. During the interviews, note was made of the attitudes and sexual activity characteristics of the respondents. The specific areas explored were: a) whether the subject had ever engaged in intercourse, b) whether the subject could be described as promiscuous, c) general positive vs. negative attitudes toward sexual activity, d) satisfaction vs. dissatisfaction with sex and sexual experiences, and e) normative vs. non-normative sexual views. (If the view was held that sexual activity was permissible if certain conditions were met, such as marriage, love, long-term relationship, it was defined as normative).

Both the main sample and the control group were asked the same questions and the various responses were compared.

FINDINGS

Evidence was not found to support the major hypothesis that drug users' unusual sexual behavior or sexual disturbance was a direct effect of amphetamine use or that amphetamine use was a substitute for sex. Such behavior could only have been attributed to amphetamines if it had been found that the non-drug using psychiatrically disturbed population did not demonstrate the same pattern of behavior. The similarity of the behavior pattern between the groups indicated that the cause of the disturbance was a variable of personality common to both groups.

Several differences were found between the drug-users and the psychiatrically disturbed non-drug using control group. It was found that amphetamine users were more sexually advanced than the non-drug using control group. Of the 25 drug users, 23 were found to have had intercourse, as opposed to 16 of the 25 non-drug users. Additionally, it was found that amphetamine users had a greater proclivity towards promiscuity than non-drug users. Nineteen of the 25 users were found to be promiscuous as compared to 8 of the 25 non-users. It was found that male and female non-drug users and male amphetamine users all leaned towards positive views of sex, however female amphetamine users demonstrated a decidedly negative attitude towards sex. The psychiatrically disturbed non-users as well as the female amphetamine users shared a tendency toward the more normative values, however,the male amphetamine users did not hold to the normative values. The amphetamine users indicated more dissatisfaction with sex overall, than did the control group. Female amphetamine users tended to display feelings of apathy and antipathy towards sex, while male amphetamine users had positive feelings toward sex.

CONCLUSIONS

There were differences found between a group of male and female amphetamine users and a control group of non-drug users in terms of sexual behavior and attitudes. However, the differences did not prove the contention that drug use is either responsible for sexual disturbance or a replacement for sexual activity. The author contends that it is more likely that sexual pathology and the use of drugs among amphetamine users is instead traceable to common, yet unidentified personality variables.

The author also concludes that since a steady elevation on the Pd (psychopathic deviacy) scale of the MMPI is the most reliable factor in analyzing personality among drug users, a study which compares high Pd non-drug users with high Pd users may better succeed in identifying the variables that separate the groups.

IV. LSD

Alpert, Richard. Drugs and sexual behavior. Journal of Sex Research, 5(1):50-56, February 1969. (1 reference)

SUMMARY

A case study is reported to illustrate the relationships the author has noted between the use of psychedelic drugs and sexual behavior. The case concerns the effect of psychedelics on homosexuality; the effect on normal sexual experience is also reported. Psychedelics offer the possibility of enriching the sexual life of the average individual and show some promise in alleviating sexual pathology. As a working model, the author postulates that the psychedelics work as a therapeutic vehicle, through perceptual-cognitive-affective reorganization.

The stimulus provides an experiential richness, freshness, and interrelatedness which, theoretically, allows for the possibility of the emergence of new external behavioral responses. After the ingestion of psychedelic chemicals, when a man looks at a woman about whom he has fixed association habits of perceiving, thinking and feeling, he not only sees her in the habitual way but in hundreds of other ways as well. Male subjects repeatedly report that to look at a woman is to see "woman"--the harlot, the virgin, the seductress, the juvenile, the matron, the mother--with all feelings--lust, anger, love, kindness, protectiveness, vulnerability. This fresh perception allows for the development of a set of new mediating responses and ultimately an alteration in external behavior patterns.

Homosexuality

A 38-year-old male who had been acting out homosexual behavior since the age of fifteen, had unsatisfactory sexual relations with three women, and considered himself bisexual, contacted the author to cure his overt homosexuality through LSD. In a two-week preparation period, the guide and the subject became acquainted, a case work-up was prepared, and the subject was directed to read certain materials to help program his own experiences. Although the guide and the subject spent a great deal of time together, which might account for the changes in behavior, the author believes LSD produced the changes.

After an orientation session with LSD, the subject was shown a set of slides of great paintings of women, and a set of photographs of his mother, old girl friends and current women friends.

The subject reported that he had felt an initial panic reaction of withdrawal followed by increasing involvement, ultimately experiencing "how biologically obvious heterosexuality is."

He reported experiencing an attraction, both sexual and otherwise, towards these women. This was the first time he could consciously recall having experienced such feelings in connection with females.

The third session included the participation of a close woman companion chosen by the subject, who wanted to have a relationship with him. Her role was to "be there" and to hold him through the session if he desired it. The subject experienced an intense panic reaction, accompanied by impotence, shrivelling of the penis, and a cold fear. No demands were made upon him and the 8 or 10 hours of the session allowed him to work through much of his anxiety. Still very uncertain about his sexual identity, he was acting out homosexually between sessions, although the frequency and compulsivity were diminishing.

The same woman participated in the fourth session. This time the subject experienced a very strong sexual desire towards her almost immediately. During the session they had intercourse which she reported as the most profound sexual experience of her life. After 8 months of living with this woman, the subject had undergone a major change in his perceptual, cognitive, and affective organization.

Normal Sexual Behavior

The model for the use of psychedelics to enrich normal sexual behavior suggests that through perceptual reorganization the sexual encounter becomes immersed in a broader biological, spiritual and social context. A parallel is drawn between this and sexual yoga through which the partners transcend the subject-object relationship and merge into the unitive experience which is dominant over the individuals involved. As part of this experience with psychedelics, sex is no longer genitally localized. All the senses enter into the sexual experience in such a way that one experiences a total body orgasm.

The author's techniques for using psychedelics with married couples are described in Alpert, Cohen and Schiller, LSD, 1966.

V. HEROIN AND METHADONE

Chessick, Richard D. The "pharmacogenic orgasm" in the drug addict. Archives of General Psychiatry, 3:545-556, November 1960.

DRUG	Opiates	
SAMPLE SIZE	50	
SAMPLE TYPE	Treatment (inpatient)	
AGE	50 Adults (18-64)	
SEX	42 Male	8 Female
ETHNICITY	Not Specified	
GEOGRAPHICAL AREA	Lexington, Kentucky	
METHODOLOGY	Exploratory/Descriptive	
DATA COLLECTION INSTRUMENT	Interviews	Psychological Tests
DATE(S) CONDUCTED	Not Specified	
NO. OF REFERENCES	30	

SUMMARY

In order to more fully understand the psychology of the drug ingestion act, a group of 50 heroin addicts was studied. The author demonstrates that intensely pleasurable sensations were experienced by all the subjects after the intravenous injection of opiates before physiological tolerance to the drug developed. This phenomenon is referred to as the "pharmacogenic orgasm."

The author examined the nature of the pharmacogenic orgasm in the study group, using a questionnaire, observation, and psychotherapy. He concludes that the psychic mechanisms involve the following cycle:

1. a threatened or potential loss of primal love

2. panic

3. regression to the oral stage

4. physically experienced craving

5. injection of drug, symbolizing introjection of ambivalently loved mother

6. the pharmacogenic orgasm

7. satiation with primal love

8. primal sleep

9. denial of the threatened or potential loss of primal love.

A review is presented of various theories related to the psychological reasons for ingesting drugs. These include the theories of Wikler and Raso, Glover, Fort, Mauer, Abraham, Simmel and others, with an emphasis on the psychoanalytic interpretation of Rado, who labelled intense pleasurable feelings an "alimentary orgasm."

METHODOLOGY

A random sample of 50 heroin addicts (42 males, 8 females) was studied at the U. S. Public Health Service Hospital in Lexington, Kentucky. All subjects were interviewed from 1-4 times and 10 were seen in psychotherapy several times a week over a period of several months. Most received psychological testing.

The study questions focused on: (1) collecting more subjective reports of a psychosomatic sensation in the addict; (2) studying patient-reported substitutes for the pharmacogenic orgasm when the drug was not available; (3) comparing the pharmacogenic orgasm in addicts with the alimentary orgasm in infants; and (4) comparing the mother-child relationships with that of the infant.

Each patient was asked 5 basic questions with reference to drug use in the period before "addiction" occurred:

1. What, if any, sensation (e.g., "thrill") is experienced upon, or soon after, taking a dose of the drug?

2. Describe this sensation in the patient's words and from whatever other data obtainable.

3. Is the sensation localized, and if so, give the location of the sensation.

4. How long does this sensation last? Does the wish to sleep accompany, precede or follow this sensation, or is there any wish to sleep?

5. What fantasies, if any, accompany (a) the administration of the drugs, and (b) the special sensation?

The primary drug used by the subjects was heroin. Some also took morphine or meperidine hydrochloride. A few patients mixed opiates with various amounts of pentobarbital, alcohol and codeine. Three patients were mixing heroin and cocaine together. The route used was always intravenous. At the time of the study all subjects had been withdrawn from heroin.

The author notes the deficiencies in attempting to scientifically report subjective experiences and, therefore, presents his results in narrative form.

FINDINGS

During the pharmacogenic orgasm:

- All patients reported some kind of special sensation soon after taking the drug. Almost all patients experienced this as a euphoric-like state.
- Time sensation was usually slowed down.
- Two physical symptoms were invariably described: a feeling of warmth and a sense of fullness, both felt primarily in the stomach.
- Ancillary activities were usually regressive in nature (sitting in a warm bathtub while taking the drug, bowel movements, erections).
- All patients reported reduced sexual and aggressive drives.
- All patients reported a wish to sleep,with a small group fighting off the wish to sleep.
- Fantasies, dreams and early memories which were reported usually revolved around the mother.

After withdrawal from heroin the following changes were noted:

- Dream material was replete with auto-erotic and archaic oral qualities.
- Many patients gained large amounts of weight and reported feelings of increased hunger.

- Over half of the volunteer admissions left the hospital against medical advice "to take drugs again in order to remove this unbearable feeling."

During psychotherapy it was noted that:

- Patients often initially presented a narcissistic, cold exterior.
- The second stage of therapy involved a very clinging dependent relationship (interpreted as a desire for a mother-like figure who would satisfy all needs).
- There was no recognition of the therapist as an individual.
- Patients formed constantly changing but not really interpersonal relationships with each other.
- The sight of needles or drugs set off reflex physiological symptoms of mild withdrawal.

CONCLUSIONS

The author compares his observations with a number of case reports and theories, briefly noted here:

Balient - archaic egotistic way of loving

Freud - childish love knows no bounds

Szasz - counter-phobic mechanism related to the attempt to deny any possible loss of primal love

Bychowski - primary ego weakness

Shur - in a state of panic, the ego may operate with non-neutralized libido, resulting in some somatic discharge phenomena such as orgasm

Cutler - possibility of a specific physiological action on the nervous system of the alimentary region.

He concludes that the intravenous injection of heroin may work in three ways to produce the pharmacogenic orgasm:

1. The drugs physiologically reduce sexual and aggressive drives leading to a feeling of more ego-mastery and well-being.
2. The drugs may produce a specific neurological effect on the alimentary region, leading to discharge of tensions through a seizure-like phenomenon.

3. Injecting the drugs may represent an introjection experience which psychologically satisfied both aggressive and libidinal needs.

Clark, June S.; Capel, William C.; Goldsmith, Bernard M.; and Stewart, Gordon T. Marriage and methadone: Spouse behavior patterns in heroin addicts maintained on methadone. Journal of Marriage and the Family, 497-502, August 1972.

DRUG	Methadone
SAMPLE SIZE	146 (73 couples)
SAMPLE TYPE	Treatment (outpatient)
AGE	Adults
SEX	73 Male; 73 Female
ETHNICITY	40 Black; 33 White (wives only)
GEOGRAPHICAL AREA	New Orleans, Louisiana
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	8

SUMMARY

In this study, wives of 73 heroin addicts or ex-addicts were interviewed regarding their husbands' behavior. Indices such as work patterns, time spent with children and wife, sharing of household chores and disciplinary problems were examined for a comparison of situations before and after methadone maintenance. The results were interpreted as evidence of the success of the methadone programs in producing social stability.

METHODOLOGY

The wives of 73 known heroin users on methadone maintenance programs in New Orleans were interviewed. Ninety percent of the participants were born in New Orleans and 5% came from contiguous states. All of the husbands and 22 of the wives were on a methadone program. There were no addicted wives whose husbands were not addicted. All the males were addicts or ex-addicts who had remained for one year or longer in methadone programs. The interviews were conducted by a trained social investigator in the homes of the participants.

FINDINGS

Employment of husbands was found to increase after methadone, particularly in the 13 cases where neither spouse worked before maintenance began. After methadone, only 7 couples were in this category.

A marked change in family discipline was noted. Before methadone, discipline tended to be left to the wife, even when she also was addicted. After entering the programs there was a greater participation by the husbands in disciplinary activities. The husbands also increased their participation in household chores, particularly those who had non-addicted wives.

Almost half of the non-addicted wives and 32% of the addicted wives reported that their husbands now spent "much more" time with the children, while 60% of the non-addicted and 36% of the addicted wives reported that they spent "much more" time with their spouses than before treatment began. Almost all of the respondents reported at least some improvement in these areas.

Change in sleep habits was also reported. Sixty-one percent of the non-addicted wives reported that their husbands slept more soundly and were more relaxed, but only 27% of the addicted wives reported this result. Forty-five percent of the addicted wives reported their husbands slept more but not as soundly as before entering the program.

The majority (76%) of the non-addicted wives reported increased sexual activity after their husbands had entered the program, while only 14% reported a decrease. Among the addicted wives, 32% experienced increased sexual activity and 23% reported a decrease.

Wives were asked about relations with police after entering the methadone program. A large majority (82%) of the non-addicted wives, and 45% of the addicted wives, felt that "police harass less than before."

CONCLUSIONS

Family relationships changed after addicted spouses entered methadone maintenance programs. Changes were in the direction hoped for by program advocates. Increases in employment and time spent with family can be taken to indicate increased stability. Non-addicted wives

found the program more satisfactory than addicted wives, who experienced the same physiological problems as did their spouses. Differences in wives' perceptions of husbands' sleep patterns can be explained as a result of the more relaxed state of the non-addicted wives. The addicted wives perceived the problem of sleep more directly and possibly more realistically.

The unexpected increase in sexual activity after methadone might have been due to more increase in propinquity and uninterrupted opportunity, rather than any change in the libido. The authors suggest that the male sexual desire may be unchanged, but his performance higher, because of the ease of obtaining methadone as compared to the exhausting daily hustle for heroin.

It was concluded that methadone programs improve family relationships. As an interim measure, they offer immediate social rewards for the addict living with his family. This gain may offset any failure to accomplish a complete "cure" of the addiction.

De Leon, George, and Wexler, Harry K. Heroin addiction: Its relation to sexual behavior and sexual experience. Journal of Abnormal Psychology, 81(1):36-38, 1973.

DRUG	Heroin
SAMPLE SIZE	31
SAMPLE TYPE	Treatment (inpatient)
AGE	Adults
SEX	Male
ETHNICITY	12 White, 15 Black, 4 Puerto Rican
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	6

SUMMARY

A relationship between sexual disturbance and addiction to heroin has frequently been suggested. A preliminary study to investigate this relationship empirically was carried out on 29 male addicts residing in the Phoenix therapeutic community, New York City. Specific questions were asked directly in a group encounter setting as to different aspects of sexual behavior and experience. The findings suggested that "sexuality" was suppressed during addiction periods.

The aim of the present study was to replicate and extend the findings of the pilot study with a new sample of addicts in a therapeutic community by employing exclusively an individual interview approach.

The results of the pilot study could not be treated statistically since the assumption of response independence could not be made for data obtained in group interviews, and group pressures may have exercised unique effects on the responses of the members.

METHODOLOGY

The subjects were 31 male addicts who were drug free while full-time residents at a Phoenix House therapeutic community. Their age range was 17 to 60 (median 25 years). The median age at onset of addiction (not usage) was 16.0 (range 10 to 22) while their median age of first heterosexual intercourse was 14.0 years (range 7 to 18 years). Forty-eight percent of the subjects were Black, 40 percent were White, and 12 percent were Puerto Rican. The subjects were chosen randomly by staff members of their respective houses and underwent a private, structured, 15 to 20 minute interview conducted by a nonaddict male. Seven questions on their sexuality were asked directly and the interviewee was instructed to answer separately for each of three periods: preaddiction, during addiction, and for the postaddiction period in the therapeutic program.

Data analysis focused on the proportion of subjects who changed responses across the three phases. Thus, unless otherwise noted, the McNemar test, which excludes the category of no change, was employed to determine the significance in the number of subjects who showed increases and decreases in their frequency estimates or ratings. Statistical comparison was always restricted to two phases; i.e., preaddiction versus addiction, during versus postaddiction, preaddiction versus postaddiction. The Chi-square values were reported at two-tailed probability levels and corrected for continuity.

FINDINGS

The findings confirmed those of the pilot investigation. During periods of heroin addiction, there is a relative "loss" of sexuality. For most subjects, frequency of intercourse, masturbation, and nocturnal emissions all decrease as does the proportion of the orgasms. All respondents said that time to ejaculation was considerably longer on heroin. A significant proportion of subjects rated the quality of the orgasm as poor and sexual desire low. Sexuality recovers in the postaddiction phase in the program in that a significant number of subjects reported a change from addiction to the program on every variable. Masturbation, nocturnal emissions, and the proportion of orgasms all increased. Desire and quality of the orgasm are rated higher and the time to ejaculation is shorter. Finally, with some exceptions, sexuality in the postaddiction phase tends to remain "higher" than in preaddiction.

CONCLUSION

While the direct pharmacological effects of opiates on sexuality need to be empirically clarified, the heroin addict feels little sexual desire, engages in less overt sexual activity, and displays a marked decrease in "sensitivity" as particularly evidenced in the extended time to ejaculation and poor quality of the orgasm. It may be hypothesized that any discomfort related to sexual arousal presumably would be mitigated in the addiction period. This suggests that one of the reinforcements in the use of heroin is its reduction of discomfort which may relate to experiences of sexual inadequacy. Such a reinforcement effect could function in both direct and indirect ways. Heroin may weaken, block, or interfere with the sexual arousal of the addict and in effect function to prevent his engaging in sexual behavior with its associated discomfort. If the occurrence of sexual behavior and/or desire does initiate anxiety, then heroin could operate as an anaesthetic. The drug would permit the addict to go through sexual behavior without experiencing any strong feelings such as desire, arousal, or anxiety.

This hypothesis must be viewed as tentative since it rests mainly upon data showing intercorrelation of measures of verbal behavior. Despite some methodological difficulties in the present approach the results show a relationship between sexual experience, sexual behavior, and heroin addiction.

Gardner, James. M. Indicators of homosexuality in the human figure drawings of heroin- and pill-using addicts. Perceptual and Motor Skills, 28:705-706, 1969.

DRUG	Multi-Drug
SAMPLE SIZE	52
SAMPLE TYPE	Treatment (outpatient)
AGE	Not Specified
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Laboratory/Examination
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	11

SUMMARY

A brief review is presented of the literature concerned with the first sex to be drawn on the Draw-a-Person as an indicator of homosexuality, and related research is reported. The conclusion drawn from this review is that such a relationship has still not been clearly supported by the data.

The research reported was conducted in an attempt to further substantiate the findings of Kurtzberg, Cavior, and Lipton (1966) with respect to the "sensitivity of the DAP test to the reported maternal identification and sexual confusion of the opiate addict" (p. 705). Results reported by Kurtzberg et al. were based on a study conducted

on a prison population, and therefore possibly explainable by external factors. The generalizability of these results to non-imprisoned populations was the main question of the present research.

METHODOLOGY

The Draw-a-Person was administered to a total of 52 male patients at the Samaritan Halfway Society, Inc., New York City, an out-patient rehabilitation center. Of these, 27 were classified as heroin addicts and 25 as addicts using pills. For the purposes of this study, depressants and stimulants were undifferentiated.

In analyzing the DAP, the measures used were sex drawn first and sex drawn larger.

FINDINGS

Of the heroin-using subjects, 94% drew the male figure first, as did 87% of the pill-using subjects. Although consistent with reported research on normals, these data contradicted those reported by Kurtzberg, et al.

Among the heroin users there were no significant differences between the sizes of the male and female figures drawn. However, the female figures drawn by the pill-using subjects were significantly larger ($p = .01$) than the male figures. These results again contradict those of Kurtzberg, et al.

CONCLUSIONS

The results reported in this research differ substantially from those they were meant to replicate. The author explains this discrepancy primarily in environmental terms, holding the differing situational factors (prison vs. non-prison) to be largely responsible. The pressures of confinement and their effects on sexual frustration and expression are discussed. In addition it is indicated that possible theoretical frameworks to be used in explaining such phenomena are still not acceptable as fact, thereby making any such interpretation no better than conjecture.

The author suggests there are only two possible solutions to this dilemma. The first is that if empirical research consistently fails to support theoretical assumptions such as the sex drawn first/homosexuality hypothesis, then such assumptions must be forgotten. The second approach suggested is that much more psychological study of drug addiction and its treatment is needed.

Hoffman, M. Drug addiction and "hypersexuality": Related modes of mastery. Comprehensive Psychiatry, 5(4)262-270, August 1964. (9 references).

SUMMARY

In this study the author reviewed some of the literature and his own observations on the personalities of persons prone to drug addiction or hypersexuality, concluding that in both cases the same mechanism is at work: a failure to derive an adequate sense of self-esteem from symbolic functioning is replaced by a direct change to physiological modes of self-esteem maintenance. The drug addict's entire life was permeated by failures in interpersonal negotiation, he resorts to a way of life in which his self-esteem is continuously buoyed up by the drug. The difference in "hypersexuality" is that the sexual orgasm is used rather than the pharmacogenic orgasm and is generally less of a predicament. The "hypersexual's" self-esteem is deflated primarily by a certain type of individual who reminds him of old, self-devaluating experiences. His ego then finds a way to overcome this feeling of depression: transform the torturing individual into one who can provide sexual gratification. By a switch to sexuality the orgastic joy temporarily erases the defeat of the ego.

FINDINGS

The Drug Addict

The paper is divided into two parts. In the first, the author discusses the addiction-prone personality. From experimental research and his own observations, he supports the idea that only a certain kind of individual, the addiction-prone personality, takes favorably to the opiates. He reviews several previous studies, beginning with Sandor Rado's conclusions that the addict without his drug suffers from a "tense depression" which is then relieved by a pharmacogenic elation that is characterized by two essential points: (1) It is brought about by the ego itself, at will, and therefore gives the addict an omnipotent sense of control over his mood, and (2) It resembles and is patterned on an "alimentary orgasm", the feeling of well-being which is diffused throughout the entire body following the ingestion of a meal. Repeatedly, addicts have described the effect of a heroin injection in sexual terms.

A conception of cardinal importance for the understanding of drug addiction is also the internalization of feelings of being "bad" or unimportant manifested in an abysmally low self-esteem, suggesting that the drug might be most usefully viewed as an elevator of the sense of self-value.

Based on the theory of E. Becker that during the Oedipal transition a child learns to change from a dependence on physiological modes to symbolic modes for the maintenance of his sense of self-value, the ability to switch from a physiological to a symbolic mode of self-esteem maintenance is dependent on the ability to play a more "adult game", i.e., the individual must have within his ego the models (objects) which would allow him to negotiate in the most complex world of symbolic attainment.

The tragedy of the drug addict is that he lacks such internalized models, or at least lacks them in sufficient quantity to make for a large number of "ego lacunae". Thus, he all too frequently will encounter a situation that he cannot manage, a "game" which he does not know how to play. When this happens, his great sense of unworthiness overcomes him again and he is plunged into a state of depression. Having already found a drug which will take him out of this feeling-state, he is forced to choose between continued depression or drug use, which supplies a simple way to achieve self-esteem. Sooner or later he chooses the latter and the addiction begins.

Hypersexuality

The author borrowed the term "hypersexual" from Fenichel to express a form of behavior or way of life in which the individual has a very large number of sexual experiences with a very large number of partners but does not engage in any really deep interpersonal relationship with any of them. To explain this clinical phenomena, a case study of an extremely promiscuous homosexual was given. In the course of therapy it emerged that the patient's reaction to attractive male adolescents was one of acute bewilderment in the face of a painful situation: the individual's presence disturbed and confused him in some inexplicable fashion. The individual's presence somehow made a call to action necessary in order to gain some form of mastery over the situation. What appeared superficially as a "hypersexual" desire for pleasure was in reality based upon a need to master, by one means or another, a predicament which followed upon any chance encounter with a certain kind of individual. The author noted that as an adolescent, the patient was overwhelmed by feelings of his brother's superiority. In his reaction to the young men whom he desired sexually, he was transferring

his adolescent feelings into the current situation, reacting to these young men as if they were his brother. He was therefore faced by the same bewilderment, confusion and sense of extremely low self-value in relation to them that he had earlier experienced in relation to the brother. His ego found that a sexualized response was a way of solving the dilemma and transformed a distressing situation into a pleasurable one, transforming the distressing object (the young man) into an object from whom pleasure could be derived. His promiscuity was seen as mainly due to three closely related factors: (1) his hostility to the sexual object could only stand repression through one sexual encounter; (2) almost every new adolescent was a challenge to him; and (3) his skill in interpersonal relationships was poor.

This type is also evident in male heterosexuals who try to replace feelings of male inferiority by a plus situation in which they not only show their ability as a seducer but gain sexual pleasure as well.

CONCLUSIONS

There are, of course, combinations of these two behavior patterns. Sometimes, for instance, the "hypersexual" is so tortured by guilt that he resorts to drugs. What is important, however, is the basic similarity of the two patterns. Many if not all "mental illnesses" or behavioral "disorders" have been characterized by the difficulty which an individual encounters in maintaining self-esteem by symbolic modes, but rarely is there seen the kind of direct switch to physiological modes of self-esteem maintenance that the drug addict and the "hypersexual" use to deal with this difficulty. In a sense, these individuals, unlike the classical schizophrenic or depressive, have found a tolerably efficient way of solving their interpersonal difficulties. It is for this reason that these people do not often feel themselves to be "mentally ill", do not voluntarily seek "treatment", and do not usually respond well even if they consciously want psychiatric therapy.

The "normal" life of the addict and the consequences of addiction. In: Irwin, John K., Principal Investigator, The Social Careers of Heroin Addicts. (NIDA grant RO-1-DA-00280), December 1973. pp. 77-90.

DRUG	Opiates
SAMPLE SIZE	1,248
SAMPLE TYPE	Incarcerated
AGE	Not Specified
SEX	Both Male and Female
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	California
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews Questionnaires
DATE(S) CONDUCTED	June 1972 to December 1973
NO. OF REFERENCES	9

SUMMARY

The study investigated the sexual effects of heroin addiction as reported by 1,248 heroin addicts who had been committed to the California Rehabilitation Center for Drug Addiction in 1971.

Information was obtained from questionnaires and personal interviews.

It was found that, contrary to other studies, heroin addicts did have frequent sexual experiences. However, frequency of sexual activities decreased as the size of habit increased. A primary factor influencing whether or not the addict had sexual experiences was the availability of a sex partner, a factor that had been ignored in previous studies. The majority of subjects who lived with a possible sex partner had more sexual experiences than subjects who lived alone or with their parents or friends.

The author concluded that the social actions (maintaining the habit, etc.) of drug addiction, rather than the drug itself, led to decreased sexual activity.

METHODOLOGY

Historically studies had emphasized the negative aspects of drug addiction. This study focused on the more "normal" or conventional aspects of the addict's life as well as the deleterious effects drug addiction had on the user's relationships with others.

The study was part of a larger study done for NIMH, which entailed a retrospective analysis of the life careers of 1,248 heroin addicts who had been committed to the California Rehabilitation Center for Drug Addiction in 1971.

Information was obtained from questionnaires and personal interviews.

FINDINGS

Data concerning the sexual lives of the subjects was quite variant from the findings of other researchers who claimed that heroin, without exception, resulted in the loss of libido. In this study, half of the respondents (49.6%) reported they had sex on the average of 2 to 5 times a week, and 13% of the respondents averaged 6 or more sexual experiences per week.

It was noted, however, that as the intensity of use grows in conjunction with the cost of daily habit, the frequency of sexual experience decreases. Although the findings are not significant, there is a definite trend, especially in cases reporting more frequent sexual experiences, for the frequency to decrease with size of habit.

The authors noted that the amount of sexual activity the addict experienced was very much dependent on the availability of a sexual partner. The majority of the subjects who lived with spouses or with a boy or girl friend had more frequent sexual experiences than those subjects who lived alone or with their parents.

	Living Arrangement			
Sex Frequence	Boy or Girl Friend	Spouse	Alone	Parents
0-1 per month	4.8%	12.1%	31.3%	32.5%
1-2 per week	32.0%	37.4%	42.6%	40.9%
3-6 + per week	63.3%	50.6%	26.1%	26.6%

Sexual relations did not seem to be influenced by whether or not both members of a couple were addicted.

CONCLUSIONS

The authors concluded that the social context of addiction, rather than the pharmacological effects of heroin, influenced the addict's sexual life. The frequency of sexual relationships tended to decrease as the size of habit and the attendant problems of attaining the drug were increased.

Findings did not agree with previous studies which stated that heroin depressed sexual desires. Rather most of the subjects who lived with possible sex partners did have frequent sexual experiences. However, the author stated that there was high probability that when both sex partners were addicted, sexual relationships could dissolve into non-sexual crime partnerships, in which obtaining the drug would become the major concern. Also, there would be the likelihood that where there was only one partner who was addicted, the relationship could dissolve because of the attendant problems of addiction.

Kurtzberg, Richard L.; Cavior, Norman; and Lipton, Douglas S. Sex drawn first and sex drawn larger by opiate addict and non-addict inmates on the draw-a-person test. Journal of Projective Techniques, 30:55-58, February 1966.

DRUG	Opiates
SAMPLE SIZE	125
SAMPLE TYPE	Incarcerated
AGE	Not Specified
SEX	Male
ETHNICITY	Not Specified
GEOGRAPHICAL AREA	New York, New York
METHODOLOGY	Controlled/Experimental
DATA COLLECTION INSTRUMENT	Interviews; Drawing Test
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	10

SUMMARY

The purpose of this study was to determine the sensitivity of the Draw-A-Person (DAP) test to the reported maternal identification and sexual confusion of the opiate addict. Previous literature has indicated that the first choice drawing of the opposite sex and the drawing of the opposite sex as larger than one's own in the DAP indicates some confusion as to sexual identification. Through this test the authors sought to test the findings of the literature on opiate addiction's relation to the dynamics of the mother-addict relationship which indicate an indifferent or absent father and a peculiarly close relationship with a dominant and over-protective mother.

Specifically, the authors were concerned with finding: (1) will more male opiate addicts draw the female figure first when compared with non-addict controls?; (2) will more addicts draw the female figure larger than the male figure?; and (3) will more addicts draw the female figure larger than the non-addict control group?

The authors found that a significantly greater number of the addicts drew the female figure first and larger than the male figure when compared with non-addicts and with normal males as reported in a previous study. They conclude that these results support the psychoanalytic postulates of maternal identification and sexual confusion in male opiate addicts.

METHODOLOGY

Fifty-nine incarcerated opiate addicts and 66 incarcerated non-addicts (125 total) of the Riker's Island Penitentiary, New York, were asked to draw a person on a blank sheet of paper. An additional drawing of the opposite sex than first drawn was obtained from 80 of the 125 inmates for the sex drawn larger test.

Inmates were classified as addicts if they had previously used heroin, experienced withdrawal at least once, and had then returned to heroin usage. Inmates were classified as non-addicts if their institutional records showed non-drug usage.

A Chi-square test was performed to compare the test results of the opiate addicts inmate group with the non-addict inmate control group. To determine whether the female figure drawings of the opiate addict were significantly larger than the male figures, means and standard deviations were obtained and t tests were performed.

The results of the findings were then compared with the previous literature, and the addict DAP tests correlated with interviews and a study of their case histories.

FINDINGS

The results showed a significantly greater number of opiate addict inmates drew the male figure first in the DAP, when compared with the non-addict inmates (X^2=6.36, Sig. at 0.02 level).

The comparison for sex drawn larger indicates that a significantly greater number of opiate addict inmates (85%) draw the female figure larger than the male figure (X^2=28.95, Sig. at 0.001 level). Addicts drew female figures significantly larger than male figures (t test, Sig. at 0.05 level). Non-addicts did not draw either figure significantly larger (t test, non-significant). Addicts drew the female figure significantly larger, the male figure significantly larger or smaller than non-addicts (t test, non-significant).

Comparison of this data with that reported in the previous literature revealed that the opiate addict inmates drew the female figure first to a greater extent than did any of the groups reported in the literature, with the exception of homosexuals.

The non-addict inmate group was found to differ significantly from normal rates previously studied with respect to sex drawn first (t test, Sig. at 0.01 level). They were not, however, found to differ significantly from any of the male psychiatric or alcoholic groups reported in the literature.

These findings correlated with interviews and case histories of male opiate addicts which generally revealed an indifferent or absent father, and a dominant and over-protective mother.

CONCLUSIONS

The previously reported characteristics relating to maternal dominance and over-protectiveness were supported in the DAP test of this study by the tendency of inmate opiate addicts to draw women first (52.5%) and to draw women larger (85%).

The authors further concluded that despite the small number of homosexuals previously tested by the DAP, it is noteworthy that this is the only sample in the literature to report more than half of the subjects tested as drawing the opposite sex first. These findings therefore tend to support recent psychoanalytic postulates regarding the similarity of opiate addict and homosexual personality patterns. They note, however, that further research is necessary to determine the reasons for individuals becoming either homosexuals or opiate addicts subsequent to these apparently similar parent-child relationships in their youth.

Waldorf, Dan. Women versus men. In: Careers in Dope. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1973. pp. 159-177.

DRUG	Opiates
SAMPLE SIZE	348
SAMPLE TYPE	Treatment (inpatient) Treatment (outpatient)
AGE	Adolescents and Adults
SEX	226 Male and 122 Female
ETHNICITY	Black, Puerto Rican, and White
GEOGRAPHICAL AREA	New York City
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Interviews
DATE(S) CONDUCTED	August - September, 1968
NO. OF REFERENCES	13

SUMMARY

At the Manhattan Rehabilitation Center 348 male and female addicts were interviewed in 1968 The study was done to determine the specific differences between men and women addicts aside from obvious sex and role differences Sex and ethnicity differences were found in the areas of disorganization of family life, economic insecurity, sexual deviance, criminality before heroin use and use of treatment facilities

METHODOLOGY

Two-hundred and twenty-six men from four Narcotics Addiction Control Commission facilities were interviewed at one sampling during August and September of 1968. At the Manhattan Rehabilitation Center 122 women addicts were interviewed twice. The first stratified, random sample was taken during August and September 1968 and consisted of 70 persons. The second, part of a larger study to determine changes over time at the treatment facility, was made during August 1968 and consisted of 52 women.

The mean age for males and females was 24 years. Mean length of heroin use was 5 years. There were more Blacks than Whites or Puerto Ricans. Both groups came from working class families. The major religious group was Catholic. Thirty-nine percent were Protestant, three percent were Jewish.

In-depth interviews were conducted with all subjects. Women were initially much more difficult to interview than men; the interview relationship was harder to establish, many were indifferent and some were hostile. Many of these problems were overcome when interviewer was carefully matched to interviewee: men interviewed the more feminine-appearing women addicts and females interviewed those appearing less feminine.

FINDINGS

Homosexual behavior at the Manhattan Rehabilitation Center was found to be more the norm than the exception. Liaisons were established by almost everyone whether she had been a lesbian on the outside or not. Much of this behavior seemed to be a way of overcoming the boredom and malaise that pervaded the center.

Women were asked if sex was primarily with men or women or half and half, on the outside, before using heroin. Of the 70 women in the first sample, 29% said primarily homosexual or bisexual. Only 3% of 224 men reported this sexual behavior.

The percentages of males and females who admitted homosexuality after heroine use did not change to any significant degree. Twenty-eight percent of the females reported homosexual or bisexual activity, 4% of the males did.

Age was found to be associated with homosexual and bisexual activity before heroin use. Of those under 21, 18% reported homosexual and bisexual activity before heroin use. Forty-two percent of those from 21 to 26 and 29% of those over 26 reported it. Younger addicts seemed less pathological, exhibited fewer neurotic or psychological symptoms, and used drugs more often because of their social significance.

The principal differences between male and female heroin addicts in this sample were:

(1) more general disorganization of family life for females,
(2) economic insecurity was greater for females while growing up,
(3) females exhibited more sexual deviance,
(4) women reported less criminality before heroin use, and
(5) women used treatment facilities less than men since it was easier for them to support themselves.

Ethnicity was found to be associated with family disorganization. More Black and Puerto Rican women than White women came from disrupted families; White women reported less family compatibility than either Blacks or Puerto Ricans.

Women were better able to support their addiction than men because of prostitution. However, they seemed to suffer more guilt and remorse as a result of their addict life than men.

CONCLUSIONS

It may be that women suffer more from their addiction and its associated behavior because of the ways that roles are defined among the sexes. Society stigmatizes addicts, prostitutes and homosexuals, and often the female addict has at least two of these characteristics.

Before the Harrison Act of 1914, women were the majority of addicts. Once the Act made addiction a criminal offense, men outnumbered women as addicts. Women feel more constrained to abide by laws and mores. Women suffer more guilt and remorse over their addiction because they are going against society's prescription for femininity as well as its laws and mores.

Wieland, William F. and Yunger, Michael. Sexual effects and side effects of heroin and methadone. In: Proceedings, Third National Conference on Methadone Treatment, New York, November 14-16, 1970. Washington, D. C.: U. S. Government Pringing Office, 1970. pp. 50-53.

DRUG	Opiates
SAMPLE SIZE	70
SAMPLE TYPE	Treatment (outpatient)
AGE	Adolescents, Adults
SEX	55 Male, 15 Female
ETHNICITY	22 Black, 48 White
GEOGRAPHICAL AREA	Philadelphia, Pa.
METHODOLOGY	Exploratory/Descriptive
DATA COLLECTION INSTRUMENT	Questionnaires
DATE(S) CONDUCTED	Not Specified
NO. OF REFERENCES	7

SUMMARY

There is very little information on the sexual effects of heroin addiction and even less on the sexual effects of methadone use. This study proposed to determine the common side effects of heroin and methadone use, as well as the sexual effects. Only the findings for the sexual effects are presented in this abstract.

The method of obtaining data was through the use of a questionnaire administered to 70 ex-heroin addicts currently on a methadone treatment program.

The results showed that there were no significant differences in sexual effects relative to the dose of methadone. In addition, there appeared to be less sexual effects on methadone than on heroin.

METHODOLOGY

The population of the study was made up of former heroin addicts presently being treated on methadone. There were a total of 70 patients, all under the age of 36. Fifty-five patients were male (40 white and 15 black) and 15 were female (8 white and 7 black). The age distribution was as follows:

	24 Yrs.	24-28 Yrs.	29-35 Yrs.
Male	28	15	12
Female	9	4	2

Patients were fairly equally divided among low-dose (50 mg. or less), moderate dose (60 to 100 mg.) and high dose (over 100 mg.) users of methadone.

The means of collecting data was through the use of a questionnaire administered by the authors of the study.

FINDINGS

Of those males (43.6%) and females (53.4%) who were ever married, 62.5% of males and 25% of females felt that drugs affected the marriage negatively.

When patients were asked to rate their sex drive, their sex activity, and their enjoyment of sex on a 4 point scale, it was found that heroin suppressed all three areas in the majority of patients. Methadone did not cause as much suppression as heroin, although a few patients experienced worse suppression from methadone.

It was found that the incidence of suppression decreased as patients changed from heroin to methadone, but findings could not determine whether this was due to the change in drug or to the change in life style.

Heroin produced more difficulty with climax and with impotence than methadone.

Heroin use tended to be associated with increased promiscuity in some patients and decreased promiscuity in others. There was virtually no effect on promiscuity for methadone users.

Both females and males tended to deny any feelings of sexual inadequacy (males = 76.3%, females = 86.6%). Passivity was produced by heroin and methadone more commonly among men than among women during sex (males = 34.5%, females = 19.9%).

While no females reported homosexuality, 14 1/2% of males admitted to homosexuality only during heroin use, and 3.7% of males admitted to homosexuality during their entire life.

More males (18.2%) than females (13.3%) admitted to prostitution to help support their habit.

Of those who kicked heroin for more than a week (23.7% of males and 13.4% of females), 53.9% of males and 100% of females reported increased sex drive. A large number of males (46.1%) felt there was no effect.

CONCLUSIONS

The authors point out that a retrospective study, such as this, is subject to distortion of memory and false information.

However, it appears that there are less sexual effects on methadone than on heroin. Sexual side effects tended to be more annoying than physical side effects, but none of the patients planned to stop methadone treatment because of these effects.

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INDEXES

The numbers in the indexes refer to the unique identification code found in the upper right-hand corner on the first page of each abstract. Roman numerals reference categories from the Table of Contents; Arabic numerals reference abstracts within categories. It should be pointed out that a given index term refers to an entire abstract rather than to pages within an abstract.

The keyword terms selected for the indexes are those terms used in the literature; no terms were inferred. The most specific term was used whenever possible. Thus, some material on marijuana will be found under that term but other material may be found under the term cannabis. Similarly, studies of heroin use may be indexed under heroin but also under opiates.

For convenience to the reader, the indexes have been divided into the following five sections:

Drugs

Includes general and specific names of all drugs mentioned in the abstract, as used by the authors of the document.

Sample Types

Terms which describe as specifically as possible the sample population studied.

Geographic Locations

Organized by state, the location where the study was carried out; includes also names of universities, schools, drug programs, committees, etc., in the order in which they occur in the abstracts.

Subjects

Terms which describe the subjects or concepts of the studies; included also are names of specific data collection instruments, evaluation tools, and questionnaires.

Authors

All authors named in the citation to each abstract are listed in the author index; however, this does not include all authors of the materials abstracted since documents with more than two authors have been cited with et al.

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Alpert, R. IV.01
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Clark, J. V.02
De Leon, G. V.03
Freedman, A. I.01
Gardner, J. V.04
Gay, G. I.02
Gershon, S. III.01
Goldsmith, B. V.02
Goode, E. II.01, II.02, II.03
Greaves, G. III.03
Hoffman, M. V.05
Kinsie, P. I.06
Kolodny, R. II.04
Kurtzberg, R. V.07
Linken, A. I.03
Lipton, D. V.07
Nicol, C. I.04
Ponting, L. I.04
Saghir, M. I.05
Sheppard, C. I.02
Stewart, G. V.02
Trethowan, W. III.02
Waldorf, D. V.08
Wexler, J. V.03
Wieland, W. V.09
Winick, C. I.06
Yunger, M. V.09

DRUGS

alcohol I.02, V.01
amphetamines I.02, I.03, I.04, I.05, I.06, II.04
amyl nitrite I.02, I.05
barbiturates I.02, I.05, II.04
cocaine I.02, I.06, II.04, III.02, V.01
codeine V.01
cyclazocine I.01
hallucinogens I.05, II.04
hashish I.03, I.04
heroin I.01, I.02, I.03, I.04, I.06, V.01, V.02, V.04, V.06, V.08
hypnotics II.04
LSD I.01, I.02, I.03, IV.01
marijuana I.01, I.02, I.04, I.05, I.06, II.01, II.02, II.03, II.04, II.05
MDA I.02
meperidine V.01
methadone V.02
methedrine I.04
methyl-amphetamine III.02
morphine V.01
opiates V.01
opium I.04
pentobarbital V.01
psychedelics I.01, I.02, IV.01
sedatives II.04
STP I.02

GEOGRAPHIC LOCATOR

California I.02
  Berkeley I.02
  Haight-Ashbury Free Medical Clinic I.02
  Rehabilitation Center for Drug Addiction V.06
  San Francisco I.05
Kentucky
  Lexington V.01
  National Institute of Mental Health Clinical Research Center II.05
Louisiana
  New Orleans V.02
New York II.02
  Manhattan Rehabilitation Center V.08
  Narcotic Addiction Control Commission V.08

New York (continued)
New York City V.03, V.04, V.08
Phoenix House V.03
Riker's Island Penitentiary V.07
Samaritan Halfway Society, Inc. V.04
Stony Brook II.01
Pennsylvania
Philadelphia V.09
United States I.06, II.05

Australia
Sydney III.02
England
London I.03, I.04

SAMPLE TYPES

college students II.01, II.03
heterosexuals I.05, II.04
homosexuals I.05, V.05
husbands V.02
inpatients V.01, V.03, V.06, V.07, V.08
outpatients I.03, V.02, V.04, V.08, V.09
patients I.02
prostitutes I.06
wives V.02

SUBJECTS

alimentary orgasm V.01, V.05
aphrodisiac I.01, I.02, II.02, II.03, II.05
bisexuality I.04
Draw-a-Person (test) V.04, V.07
food II.02
frigidity III.02
Harrison Act of 1914 V.08
heterosexuality I.02, I.04, IV.01, V.05
homosexuality I.02, I.04, I.05, III.02, V.01, V.04, V.07, V.08, V.09
hypersexuality V.05
intercourse frequency I.04, II.01, II.03, V.03
McNemar (test) V.03
masturbation III.02, V.03
Minnesota Multiphasic Personality Inventory (MMPI) III.03
music II.02
National Commission on Marijuana and Drug Abuse II.05
nocturnal emissions V.03
orgasm I.02
personality V.05
pharmacogenic orgasm V.01, V.05
physical examination II.04
pimps I.06
premarital sex II.01, II.03
promiscuity I.02, II.01, II.03, III.03, V.09
psychiatric disorders I.05
psychosexual stimulation II.05
psychotherapy V.01
schizophrenia I.05
sex attitudes II.02, II.05, III.03
sexual aggression II.05
sexual excess II.05
sexual offenses II.05
sexual pathology III.03
sexual pleasure I.02, II.02, II.03, V.01, V.09
sexual precociousness II.01, II.03, III.03
sleep patterns V.02
testosterone levels II.04
treatment IV.01

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